Chapter 1

Signal Support to the Operational Commander

This chapter describes how signal supports the Army's function in the future as the primary land force executing joint, multinational operations in war and in military operations other than war (MOOTW). Looking to the future, the Army must restructure its units to adapt to the new MOOTW requirements and be able to fight more than one conflict at a time.

SECTION I – SUPPORTING ARMY OPERATIONS

1-1. Army forces in a theater of operations, as part of a joint team, are central to a theater campaign. The Army service component command (ASCC) commander is the Army's senior operational-level commander. He can execute the operational fight, command and control tactical forces of multiple services, and manage the theater support structure. Thus, he requires command, control, communications, computers, and information systems (C4I) connectivity. Normally constructed around Army headquarters, the current ASCC in no way resembles the Army formations of World War II. Those formations were more akin to tactical formations with operational level responsibilities normally held at the army group.

1-2. Today, ASCC commanders employ forces within three states (peacetime, conflict, and war) of the theater operational environment. Because of this wide spectrum of operations and operational environments, command, control, communications, and computer (C4) support must connect the operational commander to local governments, coalition armies, and governmental and nongovernmental organizations. In addition, C4 support must interface with US commercial and strategic communications networks. The deployed ASCC must link to the Department of the Army (DA), the combatant commander, and when required, the national command authority (NCA).

1-3. The ASCC commander's challenge is to shape the military environment and set the conditions for unqualified success. Success depends on the ability of the commander to communicate across a wide spectrum of agencies and forces. "Congress can make a general, but only communications can make him a commander," said Omar Bradley, General of the Army, quoting an unnamed source in his book, *A Soldier's Story*. Bradley was the Army's senior operational level commander in Europe during World War II. His words ring true today. Communicators must provide links that will ultimately allow the ASCC commander to conduct his operational mission and enable his tactical commanders to accomplish their mission.

THREAT

1-4. Military operations can no longer be anticipated merely by analyzing an adversary's stage of economic development. Regional or local powers may employ extremely advanced military technologies. An adversary's actions require intelligent analysis of fields extending far beyond the traditional battlefield focus. Boundaries within the spectrum of operations will become even more blurred than they are now. Current political and technical trends suggest that successful conflict prosecution and termination will depend on multinational commitment, joint operations, and a high professional tolerance for the new forms of conflict. The days of the all-purpose doctrinal threat template are gone, just as the days of a single-prescription Army doctrine are gone.

1-5. The global environment for at least the next 15 years will be a time of constant instability. The information technology revolution, the evolution to a global marketplace, and the population explosion in the developing world may cause the collapse of governmental control and an increase of nongovernment military or paramilitary forces. Although no single power possesses the means to threaten the US, military forces will oppose a gamut of threats. These threats range from highly modern conventional armies to terrorists to computer hackers.

1-6. The collapse of the Warsaw Pact has unleashed a proliferation of weapons throughout the world. Although we do not foresee an adversary matching military parity with the United States, our adversaries can compete militarily in certain niches. When unable to compete, our adversaries will resort to asymmetric warfare to change battlefield conditions and enhance their chance to defeat us.

1-7. Asymmetric warfare encompasses, but is not limited to, weapons of mass destruction (WMD), information operations, and acts of terrorism. Our adversaries will support US advantages by countering our precision warfare weapons, negating our technical advantages, and attacking our vulnerabilities.

1-8. Anyone or any organization with enough money can buy modern, heavy weapons. Political ideology is no longer a limiting factor in weapons acquisition. New foreign consortiums purchase outdated Warsaw Pact weapons systems. They refurbish them with modern, high-tech levels of firepower, protection, and mobility and then sell them to the highest bidder. These hybrid systems compete against our state-of-the-art weaponry.

1-9. WMD have made the threat qualitatively different. WMD offer the potential to do extreme damage, both physical and psychological, with a single strike. Many nations are attempting to produce nuclear weapons. The proliferation and acceptance of chemical and biological weapons is growing because they are relatively inexpensive and easy to produce. Soldiers may face these deadly weapons at any time or place.

1-10. Information systems provide the vital link between tactical, operational, and strategic operations. Information operations attacks on the US military are particularly attractive to adversaries because attacks by a foreign power are indistinguishable from hacking or criminal activities. These

attacks may occur at the strategic, operational, or tactical level of operations at any time.

1-11. Terrorist groups are spread across the globe. The majority of terrorist attacks are bombings against infrastructure or military support facilities. Terrorists favor bombings because they become sensational media events that attract world attention to the terrorist cause.

1-12. Threats to our signal support systems occur in two distinct areas: electronic warfare (EW) and computer network attacks. They may occur independently or at the same time. These new means to attack our capabilities may preclude our adversaries from physically destroying our equipment and networks.

1-13. EW threat is expanding at an alarming rate. Advances in technology have increased the number, type, equipment, efficiency, and use of EW systems. Further, technology has decreased the cost of these systems so that almost any country can afford to purchase and field some type of EW capability. Any transmission from any type of signal can be intercepted, located, and/or jammed. Even our "jam resistant" systems are vulnerable to a certain extent. Electromagnetic pulse (EMP) research continues and may become a more plausible threat in the Information Age.

1-14. The Information Age has allowed millions of people access to information systems around the world. Attacks on our automated information systems (AISs) have greatly increased. Our AISs are vulnerable to inadvertent or deliberate attack by millions of people. Any person with a computer and a modem could probe or attack our AISs. Attackers vary from a disgruntled employee or an industrial espionage hacker to a political terrorist or foreign government. The possibilities are endless, as are the targets. An attack against an industrial or transportation target could have serious consequences for Army operations.

RANGE OF MILITARY OPERATIONS

1-15. The range of military operations stretches from war to MOOTW.

WAR

1-16. When instruments of national power (diplomatic, economic, and informational) are inappropriate or unable to achieve national objectives or protect national interest, the US national leadership may employ the military instrument of national power to conduct large-scale, sustained combat operations. The goal is to win as quickly and with as few casualties as possible, achieving national objectives and concluding hostilities on terms favorable to the United States and its multinational partners.

MOOTW

1-17.MOOTW focus on deterring war and promoting peace.

MOOTW Involving the Use or Threat of Force

1-18. When other instruments of national power are unable to influence a deteriorating, potentially hostile situation, military force may be required to

demonstrate US resolve and capability, support the other instruments of national power, or terminate the situation on favorable terms. The general goals of the US military operations during such periods are to support national objectives, deter war, and return to a state of peace. Such operations involve a greater risk that US forces could become involved in combat than operations conducted to promote peace.

MOOTW Not Involving the Use or Threat of Force

1-19. Use of military force in peacetime helps keep the day-to-day tensions between nations below the threshold of armed conflict and maintains US influence in foreign lands. These operations, by definition, do not involve combat, but military forces always need to be prepared to protect themselves and respond to a changing situation.

FORCE PROJECTION

1-20. Crisis response through power projection is one of the essential US strategic principles. Power projection applies to all or some of the instruments of national power. Effective power projection deters potential adversaries, demonstrates US resolve, or carries out military operations anywhere in the world. Credible power projection rapidly deploys military forces to terminate conflicts quickly with favorable terms to the United States and its allies.

1-21. Force projection is the military instrument of power projection, and its primary purpose is to deter threats to US interest. Force projection is the deployment, sustainment, employment, and redeployment of military forces from the continental United States (CONUS) or other locations for missions spanning the operational continuum. A highly credible Army force projection ability contributes significantly to deterrence.

1-22. The exact flashpoint of tomorrow is unpredictable. Worldwide threats to US interest require effective forces that can accomplish diverse missions. The end of the Cold War and the unraveling of the Soviet Union have resulted in a significant change in the international security situation. There has been a substantial rise in the political, economic, and military capability of many regional powers throughout the world.

1-23. Many regional powers now have formidable armed forces, including the latest generation weapons systems. Some are hostile to the United States and its allies. Many regional powers that are hostile towards the United States are located in areas of the world where they could threaten vital US interests; yet, there are no US forces permanently positioned ashore in those areas.

1-24. This highlights the need for a credible US force projection capability. It is certain that potential future enemies have closely observed the conduct of recent US military operations in Panama and the Persian Gulf, and could in the future seek to exploit what they may perceive as US vulnerabilities. Future opponents could seek to capitalize on the time required to deploy sizable amounts of American forces, US sensitivity to casualties, and any weakness they may have observed in our tactics and equipment.

1-25. The Army's role as the nation's strategic land force requires that it maintain its ability to command and control a mix of armored, light, and special operations forces (SOF) with appropriate combat support (CS) and combat service support (CSS) ready for global force projections. Therefore, the Army must prepare and field a force that is deployable, lethal, versatile, expandable, and sustainable so those missions can be accomplished rapidly and with minimal friendly casualties. Signal support architecture has to support global deployability, connectivity, and tactical agility. Signal units must be as strategically deployable and as tactically mobile as the forces they support.

1-26. Throughout all force projection stages, a paramount need exists for a signal support means to transport information from the sustaining-base power projection platforms at CONUS installations, through strategic gateways, to the forward-most warfighters. Signal support requirements to fulfill this task are enormous and vary greatly, depending on the military operation.

1-27. Effective communications and computer systems that ensure connectivity throughout the ASCC's battlespace are vital to planning, mounting, and sustaining a successful major operation. Operations, CSS, and intelligence all depend on responsive systems that tie together various aspects of joint and multinational operations. The ASCC commander must maintain an unbroken chain of rapid, reliable, and secure communications with his subordinate commanders and the combatant Commander in Chief (CINC) during all phases of a campaign. To perform his battle command responsibilities, the ASCC commander needs home station, en route, and intertheater/intratheater communications that are secure, flexible, and deployable. These systems must operate with joint forces, civilian agencies, and multinational or coalition forces.

PHASES OF FORCE PROJECTION

1-28. Force-projection operations follow a general flow of activity, although the phases often overlap in space and time. They seldom begin with a clear signal of what the entire package will be or with the ultimate purpose clearly in focus. No set arrangement of events should be assumed. Rather, commanders and units must be prepared to deal with activities at once, simultaneous and out of sequence; the force must be physically and mentally prepared to adjust as reality dictates.

1-29. Nonetheless, it helps to conceptualize a logical flow from phase to phase. These phases usually include predeployment, deployment, entry, decisive operations, sustainment and transition to future operations, and redeployment. The structure of force projection operations can be modified to account for specific demands of the crisis. Execution of these phases may not be distinct. The following paragraphs highlight force projection activities as they occur within the six-phase cycle.

Phase I – Predeployment

1-30. During normal peacetime operations, the Army prepares its units for force projection-missions. Army organizations must be designed, trained,

equipped, and led to prepare them for force projection. Armywide standards for readiness and deployability of all units are established, and collective deployment training emphasized. This requires frequent deployment training with Navy and US Air Force (USAF) controlled lift assets.

1-31. Army Forces (ARFOR) are alerted for force-projection missions via joint crisis action procedures (CAP). Timely and accurate portrayal of CINC requirements gives ARFOR maximum time to plan for deployment and employment. Based on forces available and needs of the joint force command (JFC) commander, the Joint Chiefs of Staff (JCS) allocate forces for the mission. At an appropriate time, signal units are allocated to a theater CINC. These signal units may or may not have been apportioned in the deliberate theater contingency plans.

1-32. Force projection is based on specific, predictive, and timely operational and logistical intelligence. Intelligence preparation must begin as early as possible so commanders can develop adequate plans. Intelligence support from a secure sanctuary (for example, CONUS) is critical to the success of a force-projection operation.

1-33. During the predeployment phase, signal planners must understand and plan for the complexity of joint, combined, and tactical network deployment and management needed to support the mission. They must have a clear understanding of the density of command posts (CPs), subscribers, and automation networks, so that plans are made to properly manage the network. They must ensure adequate control over the signal nodes, the number of transmission systems required, and their sustainability.

Phase II – Deployment

1-34. The JFC's mission statement should include a clear definition of the desired end-state of the campaign or operations. This enables commanders to tailor forces based on the factors of the operational environment and prepare for deployment based on the amount of strategic lift that is available. Based on JFC's mission, existing plans are reviewed, modified, or rewritten as necessary, and intelligence and logistics preparations accelerated. Signal commanders must conduct backward planning based on the force required for successful completion of the mission. This determines the correct mix of assets and their proper arrival sequence in the theater of operations.

1-35. During this stage, command, control, communications, and intelligence (C3I) and logistical relationships among the services of the joint force are finalized. The theater CINC or a subordinate JFC must resolve as early as possible the sequence in which Army units deploy in relation to the movement of forces of the other services. Signal commanders must clearly and quickly articulate their lift requirements following their evaluation of mission, enemy, terrain, troops, time, and civil consideration (METT-TC). Early resolution of the sequencing of signal assets into the area of operations solidifies the time-phased force and deployment data (TPFDD) and determines the time required to deploy the force.

1-36. The factors of the operational environment are the primary consideration in determining the composition of the crisis response force. The

needs of the JFC and the requirement for rapid deployment initially take priority over maximizing the efficiency of lift.

1-37. Simultaneous deployment of tactical and operational-level headquarters early in the operation, to include appropriate logistical command and control (C2), facilitates current operations, future planning, and coordination with host nation (HN) and allied forces. In addition, it allows for the reception and employment of early reinforcing units. The reception and employment of combat and signal assets are monitored to ensure sustained combat power is maintained. Throughout the deployment, signal units must maintain the flexibility to reconfigure units and adjust deployments should the needs of the JFC change while the deployment is in progress. This is particularly important during the entry phase, since the situation may rapidly change.

1-38. Corps and division-sized units that deploy into a theater of operation without echelons above corps (EAC) assets can request additional communication support. The theater signal commands (TSCs) and the US Army Signal Command (USASC) establish support packages that can provide necessary communications for those units without sufficient organic communications equipment. These signal support packages form the basis for the theater communications system (TCS) and expand as the theater matures. Some recommended capabilities, currently available assets, and lift requirements for various signal support packages are discussed below.

1-39. **Small Package (Primary)**. This package is the initial entry package. It deploys to support an initial headquarters (joint task force [JTF], US Army Central Command [USARCENT], ARFOR). It is deployable within 18 hours of notification and provides the following to a deploying HQ:

- Immediate tactical and commercial voice.
- Data (Global Command and Control System [GCCS]).
- Secret Internet Protocol Routing Network (SIPRNET).
- Nonclassified Internet Protocol Routing Network (NIPRNET).
- Video teleconferencing (VTC) support.

1-40. Equipment includes the tri-band terminal, the single-channel tactical satellite (TACSAT) team, and associated equipment. This package requires two C-130s for airlift.

1-41. **Small Package (Reserve)**. This package fulfills the primary role when all tri-bands are deployed. Although not as robust as the primary package, it is still used as an initial entry package deployed to support an initial headquarters. It is deployable within 18 hours of notification and provides immediate tactical and commercial voice, data, and VTC support to a deploying headquarters. Equipment includes the AN/TSC-93 TACSAT terminal and associated equipment. This package requires one C130 for airlift.

1-42. **Medium Package.** This package is deployed as a follow-on to the small package. It frees the small package to deploy forward to support a forward-operating base. This package can also be an initial entry package to support the intermediate staging base or headquarters. It is deployable

within 72 hours of notification and provides immediate tactical and commercial voice, data, and VTC support. Equipment includes the tri-band terminal, a single-channel TACSAT team, the mobile gateway van (MGV), and associated equipment. This package requires two C141s for airlift.

1-43. **Heavy Package**. This package is used in a developed theater for long term support of a large headquarters. It is deployable within six days of notification and provides large-scale tactical and commercial voice, data, and VTC support. Equipment includes the AN/TTC-39D, the AN/TSC-85B with 20-foot dish, the MGV, and associated equipment. This package requires two C5s for airlift.

Phase III – Entry

1-44. This is a critical phase in force projection. Depending on the mission and the threat, deploying units may have a combat or noncombat mission. In combat situations, it is likely that friendly forces are initially outnumbered. This makes this phase a particularly dangerous part of the overall operation. A forcible entry may be required, resulting in immediate combat operations. In addition, the combat force may greatly outnumber the required signal assets needed in the early stages of lodgment. This causes an austere C2 environment. Deploying appropriate C2 elements and theater distribution systems assists tactical commanders in focusing on their mission, while higher headquarters performs logistical support functions. It is critical to the execution of the operation to establish an operational level headquarters early to ensure that the tactical commander's focus is on employing forces.

1-45. Following initial deployment, the commander's focus changes to building up capabilities rapidly. The proper sequencing of forces into the area of operations contributes significantly to the stabilization of the situation and allows for rapid buildup of capabilities that permit the CINC to conduct decisive operations as early as possible. Combat may or may not be taking place; but in either case, the emphasis is on developing the theater and establishing the preconditions for executing decisive operations. Deployment will likely continue throughout the entry phase, until the conclusion of the operation. It is essential to retain the initiative throughout this phase. The signal commander enhances theater development by–

- Building stockage levels.
- Arranging civilian contractor and host/allied nation communication support.
- Firming up signal support to other services.
- Acclimatizing personnel.
- Conducting required training.
- Establishing secure throughput of supplies.
- Enhancing the quality of life for his troops.

1-46. Every effort must be made to accomplish or finalize these activities and to hedge against interruption of strategic lines of communication (LOC) in this phase. If sufficient ground combat is not available to conduct decisive operations, the commander must seek other means to attack and prevent the enemy from gaining the initiative. If combat has not begun, operations

continue in developing the communications architecture and shaping the battlefield concurrent with building up an overwhelming force to deter a potential aggressor.

1-47. In operations short of war, the deploying force must be able to perform the noncombat mission. Signal assets and CSS units will likely predominate in such operations. Based on the intelligence estimate, various degrees of force protection may be required and appropriate rules of engagement determined.

Phase IV – Decisive Operations

1-48. Commanders must always look for an opportunity to conduct decisive operations. This depends on the operational environment, but the goal is to achieve the desired end state as rapidly as possible. In some situations, deployment, entry, and sustainment and transition to future operations are conducted simultaneously, particularly when US forces can execute a coup de main.

1-49. Army forces are employed in decisive operations designed to reinstate precrisis conditions or bring about a settlement favorable to the United States and its allies. The efforts of the first three phases are realized here. Army forces will continue to interact closely with elements of the other services, US governmental agencies, and frequently with forces from allied nations. Therefore, it is extremely important to establish communication with these organizations.

1-50. For decisive operations to occur, an appropriate mix and quantity of forces must be available and sustainable over time. It is possible that the deploying force conducts decisive operations immediately upon arrival in the area of operations, thus precluding a possibly lengthy build-up phase.

1-51. In this phase, the JFC decides to move against the enemy. This point in time may be predetermined and stated in the campaign plan, or it may be tied to specific enemy action. In either case, the commander should base it on sufficient information and a clear picture of the enemy. Occasionally, a political decision may require commitment before such a picture is available. At this point, the ground commander might reposition forces to facilitate the imminent start of combat.

1-52. Decisive forcible entry operations may be required to gain access to the area of operations during the entry phase. Airborne, air assault, SOF, and Marine Corps units will be the primary ground forces for use in forcible entry situations. A forcible entry will take one of two basic forms: a coup de main or an enclave operation.

1-53. Coups de main are intended to achieve immediate, decisive effect. If circumstances allow for a coup de main, the enemy's center of gravity collapses and the desired end-state of the operation is achieved simultaneously with the initial deployment of force.

1-54. Other situations will not permit coup de main, in which case the focus of the forcible entry will be to achieve a secure enclave that allows for buildup and transition to decisive operations.

1-55. The JFC may designate a single commander to control Army and USAF elements during airborne forcible entry operations. After the airborne operation is complete, the JFC may dissolve this JTF or incorporate it within another JTF. To prepare for challenging forcible entry operations, Army, Air Force, Navy, and Marine Corps units frequently train together and continually stress signal interoperability.

Phase V – Sustainment and Transition Operations

1-56. This phase of force projection operations focuses on the activities that occur following the cessation of the open conflict. The emphasis is to restore order, minimize confusion following the operation, reestablish national infrastructure, and prepare forces for redeployment. In these situations, decision-makers balance political, economic, and information elements of power with military means to ensure that the HN is able to sustain the strategic objectives accomplished during decisive operations.

1-57. More so than any other service, the Army has the skill to assist in prisoner control, handling of refugees, destruction of minefields, civil affairs, or other activities. In conducting sustainment and transition operations, commanders emphasize activities such as nation assistance, civil affairs, and similar programs to reduce post-conflict or post-crisis turmoil and stabilize a situation until other US, international, interagency, or HN agency resumes control.

1-58. The cessation of the open conflict may be permanent or interrupted by the resumption of hostilities. Therefore, units must rapidly consolidate, reconstitute, train, and otherwise prepare to remain in theater should the fighting resume. During this time, security remains a paramount concern to prevent isolated enemy individuals or forces from bringing harm to the force. Particular emphasis should be placed on signal units, who themselves may be isolated, and may be prime targets for attack.

1-59. During this phase, signal planners should finalize plans for the commercialization of signal assets so that tactical systems could be freed up for redeployment.

Phase VI – Redeployment

1-60. The objective of this phase is to–

- Complete resolution of the situation.
- Restore optimum combat power.
- Prepare for future operations and eventual redeployment of forces to CONUS or the forward presence locations from where they deployed.

1-61. This phase includes ongoing sustainment, reorganization, and regeneration in preparation for redeployment. Redeployment planning must begin early in the force projection and be rapidly executed at the appropriate time. Redeployment of friendly forces will be heavily influenced by requirements for post-conflict operations, which could lead to further deployments.

SECTION II – SUPPORTING ARMY OPERATIONS IN THEATER

1-62. The application of operational art is the purview of the ASCC commander. While corps and divisions deal primarily with objectives and avenues of approach, the operational commander deals with centers of gravity lines of operation, and decisive points. It is around each of these that the ASCC commander achieves operational synergy through the simultaneous application of combat, CS, and CSS forces. This is what separates the operational commander from his tactical counterpart.

1-63. At the operational level, maneuver and support are co-equals. The operational commander manages the application of each portion of his force to ensure the tactical commander is able to conduct decisive operations. The inability of the logistician to coordinate the movement of support to the tactical commander can wreck the operational plan as surely as the late application of firepower. Planning and implementing C4 support at the operational level requires detailed planning to ensure that service is provided to each user.

1-64. The fundamentals of the operational art must be understood and used by the C4 planner to ensure the commander's requirement to maintain operational tempo can be achieved. In order for the ASCC commander to exercise battle command, the TSC commander must understand both friendly and enemy centers of gravity and decisive points. Through this understanding, nodes are established to support the most critical command centers and signal forces are positioned to avoid the enemies strengths.

1-65. Lines of operation also dictate the nodal structure used to provide connectivity throughout the operational area. By understanding the internal or external lines of the command, the C4 planning staff can build a nodal support structure that anticipates operational maneuver and limits the number of jumps required to support the commander's intent. An in-depth understanding of this single concept may preclude the unnecessary jumping of operational signal nodes throughout the operational battlespace. The relocation of tactical nodes is unavoidable, but stability of the nodal structure at the operational level is imperative to ensure support of the diverse organizations which comprise the ASCC.

PRINCIPLES OF SUPPORTING CAMPAIGNS AND MAJOR OPERATIONS

1-66. Support operations are designed and protected so they continue to sustain forces throughout a war or MOOTW, adapting as conditions change. Since support at the operational level can be a dominant factor in determining the nature and tempo of operations, it is imperative that C4 planners understand the "first principles" set forth in FM 100-16. Foremost for the C4 planner is the principle of connectivity.

1-67. Communications and computer systems ensure vital connectivity throughout the ASCC's battlespace. They allow the ASCC commander and his staff to plan, mount, and sustain successful major operations. Operations, intelligence, and CSS depend on responsive systems that tie together the various aspects of joint and multinational operations. To perform his duties, the ASCC commander requires an unbroken chain of secure communications that link home station, en route platforms, and in-theater forces. These communications must not be service-specific, but must be compatible with the mix of supporting forces, services, and civilian agencies present at the operational level.

1-68. The integration of operations and support plans at the ASCC level is essential to success. This achieves the synergy required to maintain the operational tempo. This integration allows C4 planners to participate as full partners in a process designed to allow them to proactively anticipate requirements. C4 planners also advise the commander and his staff of shortfalls that will have an impact on a desired course of action. It is essential to the success of C4 operations that C4 planners from the TSC participate in this process.

1-69. Operational intelligence preparation of the battlefield is an essential tool available to the ASCC commander, his staff, and major subordinate commanders. The TSC commander must be tied into this vital intelligence loop. It is important to maintain information on the enemy's intent to ensure adequate force protection measures are maintained. From an understanding of this process, C4 planners can gain insight into the location of critical intelligence nodes. With this knowledge, additional bandwidth can be planned and available to support the information requirements at these locations.

1-70. Logistics preparation of the battlefield is the optimization of force structure, resources, and strategic lift to support the ASCC's plan. Communications play a major role in this optimization process. Operational logistics cannot be provided without operational communications. Just as it is essential for C4 planners to participate in operational planning, it is equally important to participate at the same level in logistical planning. Planners from the TSC must be integral members of the logistics planning team. These planners ensure that logistics support nodes are placed where they can be supported with the best communications, and the requirements for these diverse organizations can be anticipated and provided.

1-71. Force protection of C4 facilities is essential. Since the TSC normally has a mix of mobile and fixed military communications, as well as contractor

provided communications, the ability to provide self-protection of every node varies. The ASCC commander integrates the TSC into his overall force protection plan. This plan requires communications support across the width and breadth of the ASCC area of operations. The TSC is required to integrate HN communications and military communications into a cohesive system that allows coordination of this effort.

PLANNING CONSIDERATIONS

1-72. Planning C4 support of the operational-level commander differs from the support provided to tactical commanders in that support requirements are different for every operation. Corps and division routinely establish communications networks that are nearly identical save for locations of nodes each time they support their respective corps or division. On the other hand, the TSC must develop each support plan with little reference to what has gone on before. This is due to a number of factors.

1-73. In some cases, the assigned signal force structure differs with each operation. However, the significant factor is the excess of different organizations that require C4 support or connectivity to the ASCC and how that connectivity is achieved. These organizations are never the same mix, and the requirements seem to represent an infinite set of possibilities. It is incumbent upon the TSC planner to examine each requirement carefully.

1-74. In planning the ASCC's communications network, the TSC must ensure robust connectivity to other participating services and the joint commander. At the operational level, this presents some technical challenges that must be taken into account. The Army's tactical communications system, mobile subscriber equipment (MSE), while compatible with the tri-service tactical communication (TRI-TAC) systems at the operational level and in the US Marine Corps (USMC) and USAF, does not provide an easy interface.

1-75. In a contingency situation, the joint commander is most often supported by the Joint Communications Support Element (JCSE). JCSE brings numerous capabilities to the operation. TSC planners must coordinate their plans closely with JCSE planners. The most important player is the Defense Information Systems Agency (DISA) Liaison Team in the AOR. This team closely monitors and coordinates the links between the operational and strategic communications systems.

1-76. The ASCC may be designated as the Joint Force Land Component Commander (JFLCC). This requires TSC planners to provide C2 links to USMC forces. Since the US Marine Corps (USMC) uses different automated C2 systems than does the Army, it is essential to carefully plan these links.

1-77. Just as mutual doctrine now calls for multiservice communications links between Army and Marine forces, it may be necessary to install multiple C2 systems. Planning for this role also causes the TSC planner to closely coordinate with the Navy. When USMC forces initially come ashore, they remain under the C2 of the Navy. When and where they transition to Army control dictate where Army C4 planners must provide connectivity.

1-78. Whether operating in a conflict or MOOTW, Army forces most often operate with forces of other countries. This may be under the auspices of the

United Nations (UN) or the result of a rapidly formed coalition. In most cases, interoperability issues have not been worked out in advance. North Atlantic Treaty Organization (NATO) is the rare exception to this. TSC planners can assume interoperability between NATO-standard equipment.

1-79. In planning for multinational operation with non-NATO countries, planners have to assume no interoperability and plan enough nodal assets to overcome this shortfall. This lack of standard interoperability is one of the key reasons the POWER Projection for Army Command, Control, and Communications (POWER PAC3) company was formed. Its six liaison-team packages provide an interface into six different national headquarters. Operations with non-NATO countries also lead planners to overcome the lack of bilateral agreements for the use of common communications security (COMSEC). US policies of releasability must be considered as a part of operational planning.

1-80. The US government has other agencies other than the Department of Defense (DOD) operating in cooperation with US forces, primarily the Department of State. These other organizations must link to the operational commander. They must have secure communications links to ensure that country team members can carry out their duties. Noncombatant evacuation operation (NEO) is planned and implemented if necessary and operational implications on national strategy discussed. In MOOTW, other agencies, such as the Red Cross, are present. Some of these agencies bring their own communications equipment. Interoperability between these packages cannot be assumed.

1-81. The UN provides support to operations. This may be in the form of refugee support or oversight if operations are under the auspices of the UN. Unlike US agencies, the UN normally expects to be serviced by US forces for communications. The TSC ensures the operational commander has reliable communications with UN agencies.

1-82. Numerous nongovernmental agencies are present. These agencies range from groups assisting refugees to private groups providing all manner of humanitarian assistance. These groups operate in cooperation with the ASCC if they are linked to the ASCC. They receive some form of C4 service or linkage as part of the TSC plan. These groups may interface commercially; but based on their role, they may require some level of COMSEC.

1-83. The simultaneous planning of an exit strategy is one of the keys to planning any operation. In the past, this has usually meant planning to revert to HN communications. In most cases, this causes delays in the exit of US communications forces. Recently, the use of commercial contractors supplements HN communications to speed up the process of transitioning from mobile communications to a more long-term capability.

1-84. At the operational level, the demands for large communications pipes may require the introduction of commercial communications to supplement mobile equipment from the start of operations. TSC planners can reduce airlift requirements and begin the transition process by the early introduction of commercial communications. There are various vendors available to provide these services and this must be considered as if it were a unit assigned to the TSC with respect for planning.